

Claims

1. Synchronizer for more than one optical RZ signal in a wavelength multiplex transmission system comprising
 - 5 • at least one variable delay line (1) with an input receiving RZ-WDM optical channels (2)
 - at least one delay controller (3) receiving the RZ-WDM output optical channels (10)
 - the delay controller generating a control signal depending on the HF power of the RZ-WDM output optical channels (10) and
 - 10 • a control circuit (9) to control the at least one delay line (1) in such a way that the optical WDM channels are synchronized.
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2. Synchronizer according to claim 1, comprising a variable wavelength dependant delay line (1) for a subset of two RZ-WDM optical channels (1) the channels are separated by fiber grating reflectors (11).
- 20 3. Synchronizer according to claim 1, comprising a variable wavelength dependant delay line (1) for a subset of two RZ-WDM optical channels (1) the channels are separated by fiber grating reflectors (11) and optical filters.
4. Method for synchronization of RZ-WDM optical signals realized
 - 25 by the steps:
 - Separating two channels from the WDM multiplex
 - Synchronizing them by

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- Analyzing the HF power of the two channels
 - Generating a control signal for the variable delay line
 - Controlling the delay line
 - And feeding the resulting synchronized signals back to the next subset of channels so that the synchronized channels are one of the two channels of the subset.
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5. Method for synchronization of RZ-WDM optical signals realized by the steps:
- Separating two channels from the WDM multiplex with optical filters
 - Synchronizing them by
 - Analyzing the HF power of the two channels
 - Generating a control signal for the variable delay line
 - Controlling the delay line
 - And feeding the resulting synchronized signals back to the next subset of channels.
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6. Method for synchronization of RZ-WDM optical signals according to claim 4 in a way that every channel is synchronized with channel 1.
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7. Method for synchronization of RZ-WDM optical signals according to claim 4 in a way that the adjacent channels are synchronized.

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